

What Is Claimed Is:

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1 1. A method of reducing the number of times
2 a main power unit of a hybrid electric vehicle is
3 activated to supply power to an auxiliary system of the
4 vehicle during a given drive cycle comprising a sequence
5 of the following steps:

6 determining the ON/OFF status of said unit;

7 if the unit is ON requesting that the unit be
8 maintained ON until the value of an auxiliary system
9 parameter exceeds a first threshold value; and

10 if the unit is OFF requesting that the unit be
11 turned ON when the value of said parameter falls below a
12 second threshold value.

1 2. A method of reducing the number of times
2 a main power unit of a hybrid electric vehicle is
3 activated to supply power to an auxiliary system of the
4 vehicle during a given drive cycle comprising a sequence
5 of the following steps:

6 determining the ON/OFF status of said unit;

7 determining whether the value of an auxiliary
8 system parameter is within or outside a window defined
9 by first and second threshold values;

10 requesting a change of status from OFF to ON
11 if the value of the parameter is outside said window and
12 greater than said second threshold value; and

13 requesting a change of status from ON to OFF
14 if the value of the parameter is outside said window and
15 greater than said first threshold value.

1 3. The method of Claim 1 wherein said first
2 threshold value is a unit ON auxiliary system threshold

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3 value and said second threshold value is a unit OFF
4 auxiliary system threshold value and further comprises
5 the steps of:
6 setting said unit OFF auxiliary system
7 threshold value when the status of said unit is OFF; and
8 setting said unit ON auxiliary system
9 threshold value when the status of said unit is ON.

1 4. The method of Claim 1 wherein said main
2 power unit is a piston driven engine.

1 5. The method of Claim 1 wherein said
2 auxiliary system is a brake booster vacuum system.

1 6. The method of Claim 1 wherein said
2 auxiliary system is an air conditioning and heating
3 system.

1 7. The method of Claim 1 wherein said
2 auxiliary system is a purge vapor system.

1 8. The method of Claim 7 wherein said
2 auxiliary system is a catalyst system.

1 9. The method of Claim 3 wherein said
2 vehicle includes a plurality of auxiliary systems and
3 said step of requesting that a unit ON status be
4 maintained is performed if a predetermined parameter in
5 any of said plurality of auxiliary systems is below
6 respective unit ON auxiliary system threshold values,
7 and said step of requesting a unit ON status is
8 performed if a predetermined parameter in any of said

9 plurality of auxiliary systems is below respective unit
10 OFF auxiliary system threshold value.

10. A system for reducing the number of times
a main power unit of a hybrid electric vehicle is
activated to supply power to an auxiliary system of the
vehicle during a given drive cycle comprising:
means determining the ON/OFF status of said
unit;
means requesting that the unit be maintained
ON until the value of an auxiliary system parameter
exceeds a first threshold value; and
means requesting that the unit be turned ON
when the value of said parameter falls below a second
threshold value.

11. The system of Claim 10 wherein said main
power unit is a piston driven engine.

12. The system of Claim 10 wherein said
auxiliary system is a brake booster vacuum system.

13. The system of Claim 10 wherein said
auxiliary system is an air conditioning and heating
system.

14. The system of Claim 10 wherein said
auxiliary system is a purge vapor system.

15. The system of Claim 14 wherein said
auxiliary system is a catalyst system.

